Sounak Mandal 3. Stepl! Feedback network 19E110088 feedback of Rs RD2 Vin IR RP OVOUN Page No - 10 ctep 2: Forward amplifier from Mi, Mz, Ro, and Roz and Rs steps: enput and output port of feedback of Rs Of Rc i/p step 4: Breaking loop for the foll to get the Vin Rel My Res 22d x 20 2 - 1  $-\frac{1}{2}Rs$   $\frac{1}{2}Rs$   $\frac{1$ step 5: feedback factor step 6: Open loop parameters Vr ~ - RDI [Here ray is accumuded the ringer]. Vrom = - 9m2 [RD211 (RF+RS)] 11802] Av = 9m2 [Rp211 (Rp.Rs) into 2 Rp1 ofmi + RSII RE

$$R_i = \infty.$$

$$R_0 = R_{02} || (R_F + R_S) || r_{02}$$

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stept: assed woop parameters

$$AiJ = \frac{Av}{1 \cdot AvB}$$

$$Av = \frac{9m_2Rp_1 \left[Rp_2 | 1|(R_f + R_s)| 1|r_{12}\right]}{\frac{1}{9m_1} \cdot R_s | 1|R_f}$$

$$Rif = R_i (1 \cdot AvB)$$

$$Rof = \frac{Ro}{1 \cdot AvB}$$

$$P : \frac{R_s}{R_s + R_f}$$

Thun the exprescious the exprescious are

Avg = 
$$\frac{9m_2Rp_1 \left[Rp_2 11 \left(R_F + R_S\right) 11 r_{02}\right]}{\frac{5}{m_1} + R_S 11 R_F}$$

$$1 + \frac{RS}{R_S + R_F} \frac{9m_2Rp_1 \left[Rp_2 11 \left(R_F + R_S\right) 11 r_{02}\right]}{\frac{5}{m_1} + R_S 11 R_F}$$

$$Rof = \frac{Ro2 11 (RF+RS) 11 ro2}{1 + \frac{RC}{RS+RF} 9m2 [Ro2 11 (RF+RS) 11 ro2] Ro1}$$

$$\frac{1}{2m} + RS11RF$$